OM-1600 199 525E

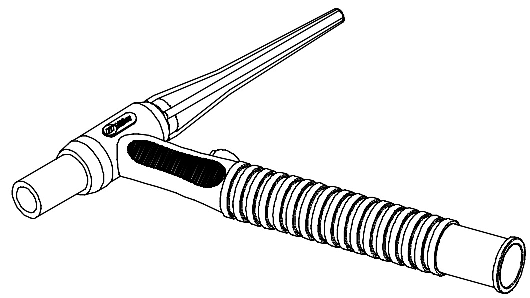
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Processes

TIG (GTAW) Welding

Description

TIG Torch



Diamondback Series

GTAW Torches

DB1712R, DB1725R, DB1712RDI, DB1725RDI, DB1712RDI25, DB1725RDI25, DB17V12R, DB17V25R, DB17V12-2, And DB17V25-2

OWNER'S MANUAL

www.MillerWelds.com

From Miller to You

Thank you and *congratulations* on choosing Miller. Now you can get the job done and get it done right. We know you don't have time to do it any other way.

That's why when Niels Miller first started building arc welders in 1929, he made sure his products offered long-lasting value and superior quality. Like you, his customers couldn't afford anything less. Miller products had to be more than the best they could be. They had to be the best you could buy.

Today, the people that build and sell Miller products continue the tradition. They're just as committed to providing equipment and service that meets the high standards of quality and value established in 1929.

This Owner's Manual is designed to help you get the most out of your Miller products. Please take time to read the Safety precautions. They will help you protect yourself against potential hazards on the worksite. We've made installation and operation quick and easy. With Miller you can count on years of reliable service with proper maintenance. And if for some reason the unit needs repair, there's a Troubleshooting section that will help you figure out what the problem is. The parts list will then help you to decide the exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.

ISO 9001:2000 REGISTERED QUALITY SYSTEM

Miller is the first welding equipment manufacturer in the U.S.A. to be registered to the ISO 9001:2000 Quality System Standard.



Miller Electric manufactures a full line of welders and welding related equipment. For information on other quality Miller products, contact your local Miller distributor to receive the latest full line catalog or individual catalog sheets. **To locate your nearest distributor or service agency call 1-800-4-A-Miller, or visit us at www.MillerWelds.com on the web.**

TRUE BLUE® WARRANTY

Working as hard as you do – every power source from Miller is backed by the most hassle-free warranty in the business.

Miller®

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Notes

SECTION 1 –SAFETY PRECAUTIONS FOR GTAW TORCHES – READ BEFORE USING

SR6_8/03

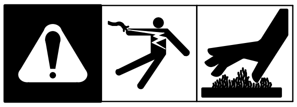
1-1. Symbol Usage



Means Warning! Watch Out! There are possible hazards with this procedure! The possible hazards are shown in the adjoining symbols.

▲ **Marks a special safety message.**

☞ *Means NOTE; not safety related.*



This group of symbols means Warning! Watch Out! Possible ELECTRIC SHOCK and HOT PARTS hazards. Consult symbols and related instructions below for necessary actions to avoid the hazards.

1-2. GTAW Torch Hazards

GTAW WELDING can be hazardous.

PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACEMAKER WEARERS KEEP AWAY UNTIL CONSULTING YOUR DOCTOR.

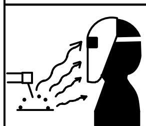
In welding, as in most jobs, exposure to certain hazards occurs. Welding is safe when precautions are taken. The safety information given below is only a summary of the more complete safety information found in the welding power source Owner’s Manual. Read and follow all safety precautions.

HAVE ALL INSTALLATION, OPERATION, MAINTENANCE, AND REPAIR WORK PERFORMED ONLY BY QUALIFIED PEOPLE.



ELECTRIC SHOCK can kill.

1. Always wear dry insulating gloves.
2. Insulate yourself from work and ground.
3. Do not touch live electrode or electrical parts.
4. Repair or replace worn, damaged, or cracked torch or cable insulation.
5. Turn off welding power source before changing tungsten electrode or torch parts.
6. Keep all covers and handle securely in place.



ARC RAYS can burn eyes and skin.

1. Wear welding helmet with correct shade of filter.
2. Wear correct eye and body protection.
3. Cover exposed skin.



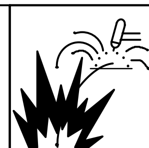
FUMES AND GASES can be hazardous to your health.

1. Keep your head out of the fumes.
2. Ventilate area, or use breathing device.
3. Read Material Safety Data Sheets (MSDSs) and manufacturer’s instructions for material used.



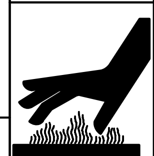
BUILD UP OF GAS can injure or kill

1. Shut off shielding gas supply when not in use.
2. Always ventilate confined spaces or use approved air-supplied respirator.



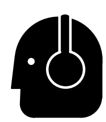
WELDING can cause fire or explosion.

1. Do not weld near flammable material.
2. Do not weld on closed containers.
3. Watch for fire; keep extinguisher nearby.



HOT SURFACES can burn skin.

1. Allow torch to cool before touching.
2. Do not touch hot metal.
3. Protect hot metal from contact by others.



NOISE can damage hearing; SOME APPLICATIONS, SUCH AS PULSING, are noisy.

1. Check for noise level limits exceeding those specified by OSHA.
2. Use approved ear plugs or ear muffs if noise level is high.
3. Warn others nearby about noise hazard.

EMF INFORMATION

Considerations About Welding And The Effects Of Low Frequency Electric And Magnetic Fields

Welding current, as it flows through welding cables, will cause electromagnetic fields. There has been and still is some concern about such fields. However, after examining more than 500 studies spanning 17 years of research, a special blue ribbon committee of the National Research Council concluded that: "The body of evidence, in the committee's judgment, has not demonstrated that exposure to power-frequency electric and magnetic fields is a human-health hazard." However, studies are still going forth and evidence continues to be examined. Until the final conclusions of the research are reached, you may wish to minimize your exposure to electromagnetic fields when welding or cutting.

To reduce magnetic fields in the workplace, use the following procedures:

1. Keep cables close together by twisting or taping them.
2. Arrange cables to one side and away from the operator.
3. Do not coil or drape cables around your body.
4. Keep welding power source and cables as far away from operator as practical.
5. Connect work clamp to workpiece as close to the weld as possible.

About Pacemakers:

Pacemaker wearers consult your doctor first. If cleared by your doctor, then following the above procedures is recommended.

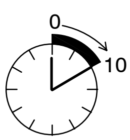
SECTION 2 − SPECIFICATIONS

2-1. Specifications

	Model	
	DB17	**DB17V (With Gas Valve)**
Ampere Rating	150 Amps W/Argon Gas @ 100% Duty Cycle DCEN, ACHF	
Cooling Method	Air	
Tungsten Size	.020 Thru 1/8 in (0.5 Thru 3.3 mm)	
Cable Options	12-1/2 ft (3.8 m) or 25 ft (7.6 m) One-Piece High−Flex	12-1/2 ft (3.8 m) Or 25 ft (7.6 m) One-Piece High−Flex, Or 12-1/2 ft (3.8 m) Or 25 ft (7.6 m) Two-Piece High−Flex
Dimensions	Length: 8 in (203 mm); Handle Diameter: 15/16 in (24 mm); Weight: 3.7 oz (105 g)	Length: 8 in (203 mm); Handle Diameter: 15/16 in (24 mm); Weight: 4.5 oz (138 g)

2-2. Duty Cycle



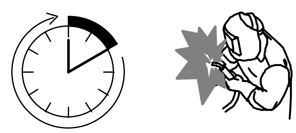


Minutes

Definition

Duty Cycle is percentage of 10 minutes that torch can weld at rated load without overheating.

100% Duty Cycle At 150 Amperes Using Argon Gas



Continuous Welding

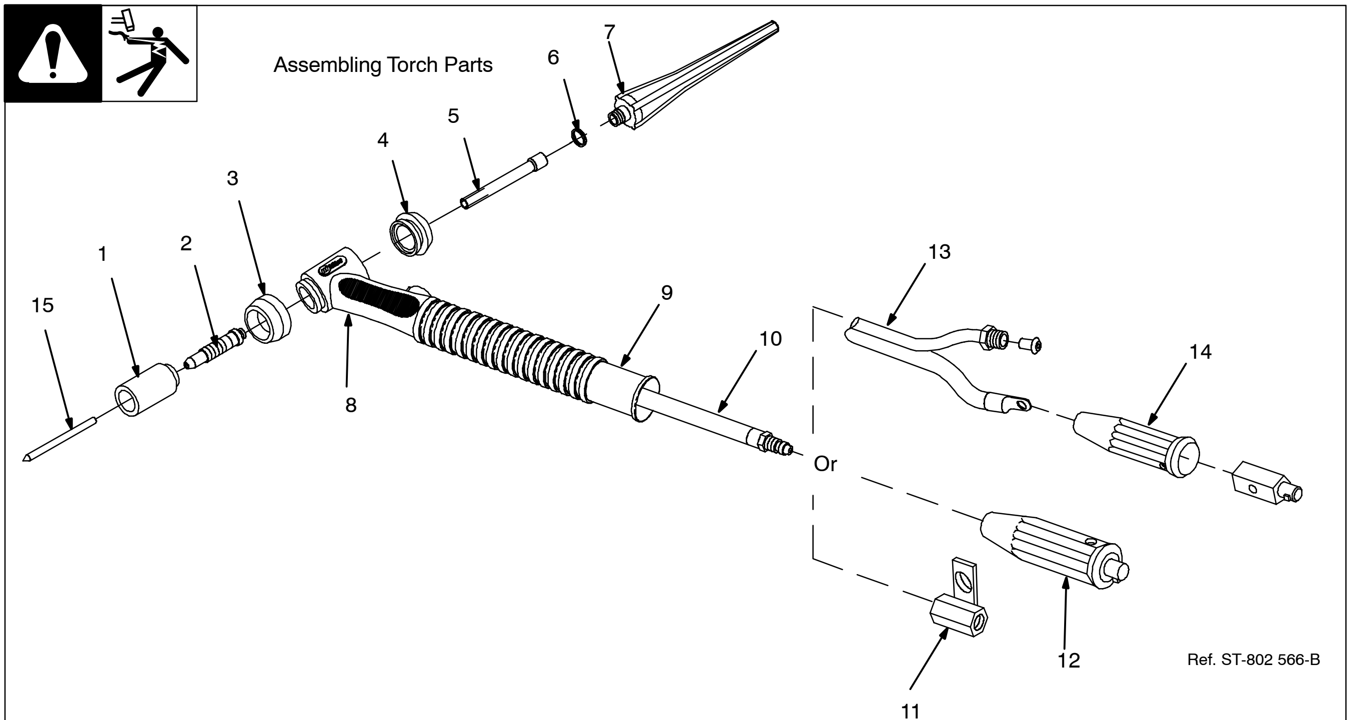
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EXCEEDING RATED AMPERAGE can damage torch and void warranty.

- Do not exceed rated amperage (see Section 2-1)

SECTION 3 – INSTALLATION

3-1. Required Torch Parts And Torch Assembly



1 Cup
2 Collet Body
3 Heat Shield
4 Backcap Insulator
5 Collet
6 O-Ring
7 Backcap
8 Torch Body
9 Handle

10 One-Piece Power Cable
11 Power Cable Adapter
12 International Style Flow-Through Adapter

Note: Adapter needed only if torch is equipped with one-piece cable.

13 Two-Piece Power Cable
14 International Style Connector

Note: Connector needed only if torch is equipped with two-piece cable (see Section 3-2).

Assembling Torch Body

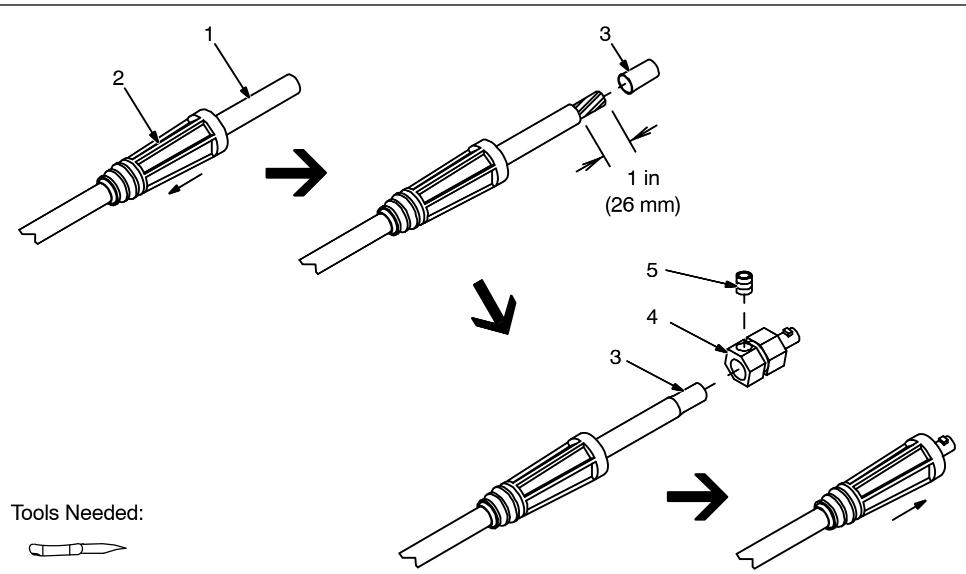
Keep connections tight. Replace cup, heat shield, and backcap as needed.

15 Tungsten Electrode (See Section 5)

Installing Tungsten

To adjust tungsten position, loosen backcap.

3-2. International Style Connector Assembly



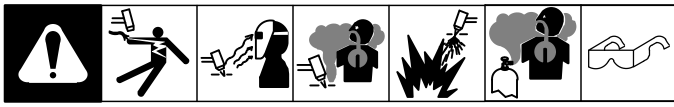
1 Weld Output Cable
2 Insulating Boot
3 Sleeve

Slide insulating boot onto cable; strip cable and install sleeve.

4 Connector Body
5 Setscrew

Insert cable with sleeve fully into connector body, tighten setscrew, and slide insulating boot over connector.

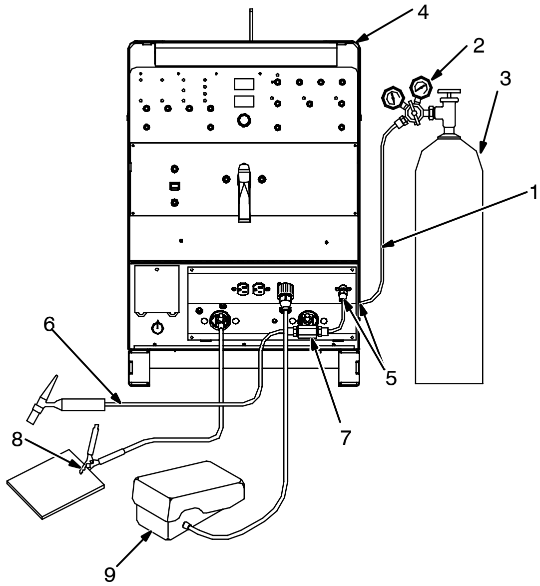
3-3. Connecting Torch



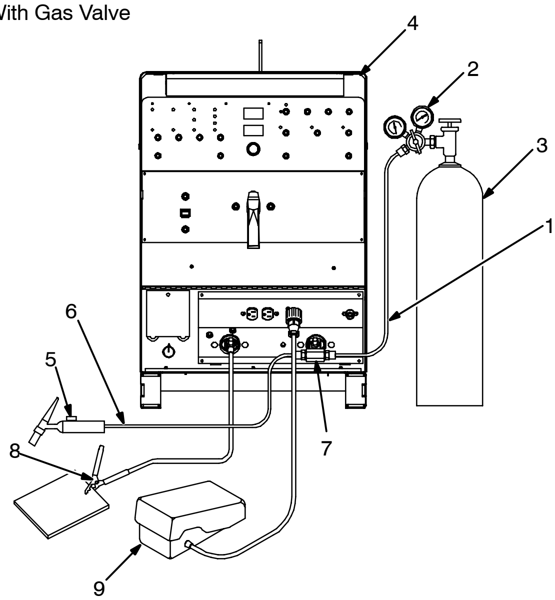
A. Connecting Torch With One-Piece Cable

If applicable, install high-frequency unit.

Torch Without Gas Valve



Torch With Gas Valve



▲ **Turn Off welding power source power before installing torch.**

Obtain the following hose:

1 Gas Hose With 5/8-18 Right-Hand Fittings

Connections:

2 Regulator/Flowmeter

3 Gas Cylinder

4 Welding Power Source

5 Gas Valve

Operating Torch Gas Valve:

Valve controls gas preflow and postflow. Open valve on torch just before welding.

Preflow is used to purge the immediate weld area of atomsphere.

Postflow is required to cool tungsten and weld, and to prevent contamination of tungsten and weld. After welding, leave valve open about 1 second for every 10 amperes of weld current. Close valve on torch when postflow is finished.

6 One-Piece Torch Cable

7 Power Cable Adapter

Connect gas hose and power cable to adapter before connecting adapter to weld output terminal.

8 Work Clamp

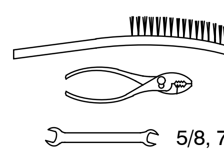
Connect work clamp to clean, paint-free location on workpiece, close to weld.

Use wire brush to clean weld joint area.

9 Foot Control

803 313

Tools Needed:

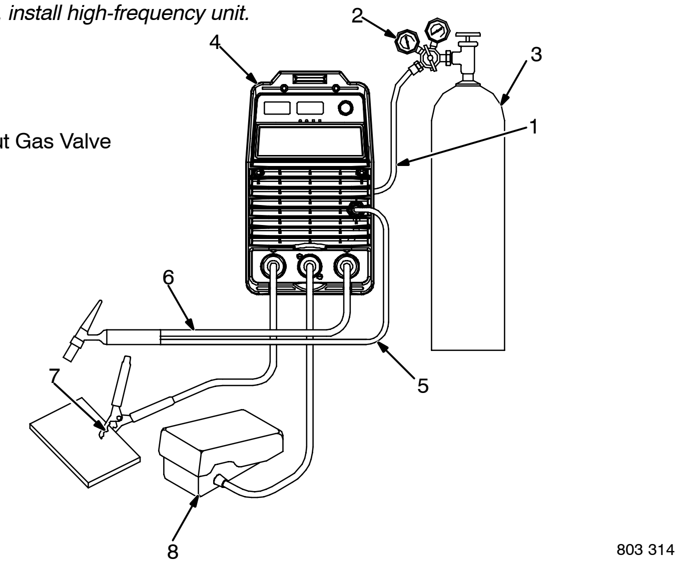


5/8, 7/8 in

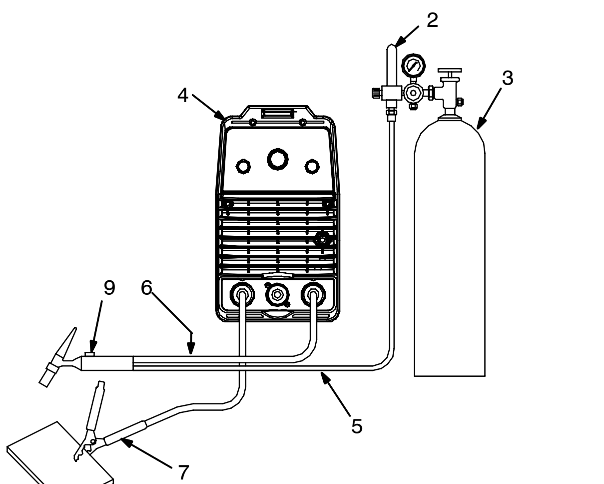
B. Connecting Torch With Two-Piece Cable

☞ *If applicable, install high-frequency unit.*

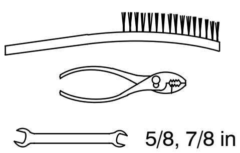
Torch Without Gas Valve



Torch With Gas Valve



Tools Needed:



▲ **Turn Off welding power source power before installing torch.**

Obtain the following hose:

1 Gas Hose With 5/8-18 Right-Hand Fittings

Connections:

2 Regulator/Flowmeter

3 Gas Cylinder

4 Welding Power Source

5 Torch Gas-In Hose

6 Torch Power Cable

7 Work Clamp

Connect work clamp to a clean, paint-free location on workpiece, close to weld area.

Use wire brush to clean weld joint area.

8 Foot Control

9 Gas Valve

Valve controls gas preflow and postflow. Open valve on torch just before welding.

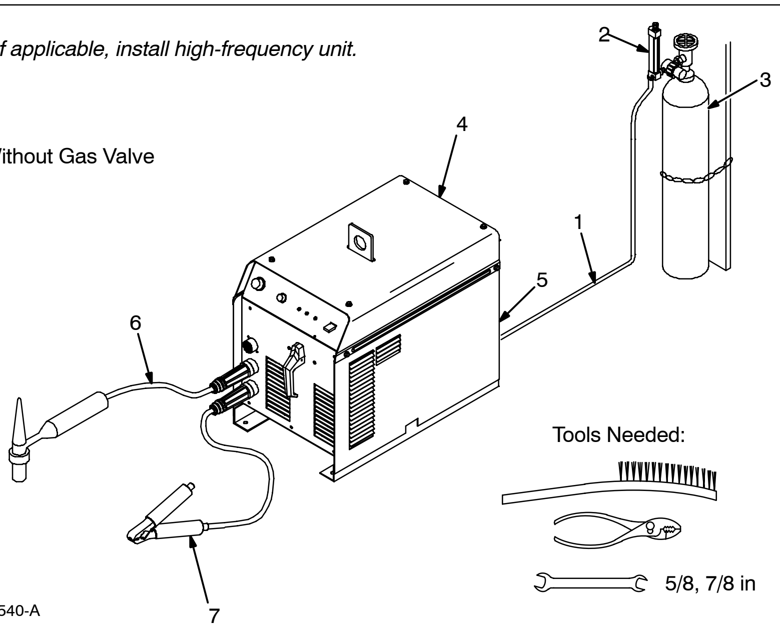
Preflow is used to purge the immediate weld area of atomsphere.

Postflow is required to cool tungsten and weld, and to prevent contamination of tungsten and weld. After welding, leave valve open about 1 second for every 10 amperes of weld current. Close valve on torch when postflow is finished.

C. Connecting Torch With Flow-Through Type Connection

☞ *If applicable, install high-frequency unit.*

Torch Without Gas Valve



Ref. ST-802 540-A

▲ **Turn Off welding power source power before installing torch.**

Obtain the following hose:

1 Gas Hose With 5/8-18 Right-Hand Fittings

Connections:

2 Regulator/Flowmeter

3 Gas Cylinder

4 Welding Power Source

5 Gas Valve

6 One-Piece Torch Cable

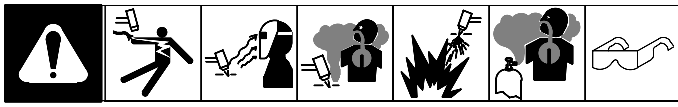
7 Work Clamp

Connect work clamp to clean, paint-free location on workpiece, close to weld area.

Use wire brush to clean metal at weld joint area.

SECTION 4 – MAINTENANCE & TROUBLESHOOTING

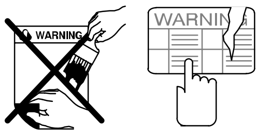
4-1. Routine Maintenance



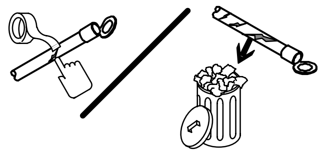
▲ **Disconnect torch before maintaining.**

40 Hours

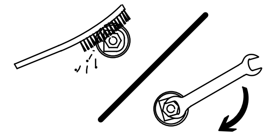
Replace unreadable labels.



Repair or replace cracked weld cable.

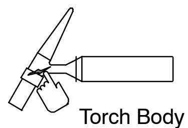


Clean and tighten weld terminals.

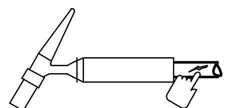


Replace cracked parts





Torch Body



Torch Cable



4-2. Troubleshooting

NOTE ☞ *Before using troubleshooting table, check selection and preparation of tungsten electrode according to Section 5.*

Trouble	Remedy
Arc will not start. High frequency present and visible at the torch.	Check cable and work connections. Be sure weld circuit is complete (see Section 3-3).
	Check and be sure shielding gas is present.
Lack of high frequency; difficulty in establishing arc.	Select proper size and type of tungsten. Properly prepare tungsten according to Section 5.
	Check cables and torch for cracks or bad connections. Be sure that torch cables are not close to any grounded metal. Repair or replace necessary parts.
	Check torch consumables. Be sure collet and collet body are correctly installed and tightened (see Section 3-1).
	Check welding power source High Frequency control, and if necessary, check and adjust spark gaps.
Torch gas valve not working properly (if applicable).	Have Factory Authorized Service Station/Service Distributor check valve.
No shielding gas flow from torch.	Be sure valves on gas supply are open.
	Check cable for kinks or blockage.
	Check and tighten all gas supply fittings.
	Check cables and torch for cracked insulation or bad connections. Repair or replace (see Section 4-1).
	Make sure collet is installed correctly (see Section 3-1).
Tungsten electrode oxidizing and not remaining bright after conclusion of weld.	Shield weld zone from drafts.
	Increase postflow time.
	Increase gas flow rate. Check manufacture's recommendations.
	Check and tighten all gas fittings.
	Check gas valve and flow meter/regulator.
	Select proper size and type of tungsten. Properly prepare tungsten (see Section 5).
Excessive tungsten electrode consumption.	Select proper size and type of tungsten. Properly prepare tungsten according to Section 5.
	Check polarity setting on welding power source (see welding power source Owner's manual).
	Check for proper gas flow rate. Check manufacture's recommendations.
	If torch is water cooled, check torch and cables for water leaks. Repair or replace if necessary (see Section 4-1).

Trouble	Remedy
Wandering arc	Shield weld zone from drafts.
	Reduce gas flow rate.
	Select proper size and type of tungsten. Properly prepare tungsten according to Section 5.
	When using AC, check welding power source High Frequency control setting, and increase setting if necessary.
Yellow powder or smoke on cup.	Use proper type shielding gas.
	Check for proper gas flow rate. Check manufacture's recommendations.
	Increase postflow time.
	Check torch cup size. Match cup size to joint being welded.
Erratic arc	Make sure base material is clean and free of contaminates.
	When using DC, check polarity, and/or polarity of welding cables.
	Select proper size and type of tungsten. Properly prepare tungsten according to Section 5.
	Use proper arc length. Arc length may be too long or too short.
	When using AC, check welding power source High Frequency control setting, and be sure it is operating continuously.
	When using AC, slow travel speed can cause erratic arc. Adjust travel speed.
Porosity in weld.	Check for proper type gas and correct flow rate. Check manufacture's recommendations.
	Check and tighten gas fittings.
	Make sure base material and filler material is clean and free of contaminates.
	Check for impurities and moisture in gas lines. Purge if necessary.
	If torch is water cooled, check torch and cables for water leaks. Repair or replace if necessary (see Section 4-1).

SECTION 5 – SELECTING AND PREPARING TUNGSTEN ELECTRODE FOR DC OR AC WELDING

ac/dc_gtaw 2/2004

▲ **Whenever possible and practical, use DC weld output instead of AC weld output.**

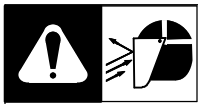
5-1. Selecting Tungsten Electrode (Wear Clean gloves To Prevent Contamination Of Tungsten)

Electrode Diameter	Amperage Range - Gas Type♦ - Polarity			
	DC – Argon – Electrode Negative/Straight Polarity	DC – Argon – Electrode Positive/Reverse Polarity	AC – Argon	AC – Argon – Balanced Wave
2% Ceria (Orange Band), 1.5% Lanthanum (Gray Band), Or 2% Thorium (Red Band) Alloy Tungstens				
.010”	Up to 25	*	Up to 20	Up to 15
.020”	15-40	*	15-35	5-20
.040”	25-85	*	20-80	20-60
1/16”	50-160	10-20	50-150	60-120
3/32”	135-235	15-30	130-250	100-180
1/8”	250-400	25-40	225-360	160-250
5/32”	400-500	40-55	300-450	200-320
3/16”	500-750	55-80	400-500	290-390
1/4”	750-1000	80-125	600-800	340-525
Pure Tungsten (Green Band)				
.010”	Up to 15	*	Up to 15	Up to 10
.020”	5-20	*	5-20	10-20
.040”	15-80	*	10-60	20-30
1/16”	70-150	10-20	50-100	30-80
3/32”	125-225	15-30	100-160	60-130
1/8”	225-360	25-40	150-210	100-180
5/32”	360-450	40-55	200-275	160-240
3/16”	450-720	55-80	250-350	190-300
1/4”	720-950	80-125	325-450	250-400
Zirconium Alloyed Tungsten (Brown Band)				
.010”	*	*	Up to 20	Up to 15
.020”	*	*	15-35	5-20
.040”	*	*	20-80	20-60
1/16”	*	*	50-150	60-120
3/32”	*	*	130-250	100-180
1/8”	*	*	225-360	160-250
5/32”	*	*	300-450	200-320
3/16”	*	*	400-550	290-390
1/4”	*	*	600-800	340-525

♦ Typical argon shielding gas flow rates are 15 to 35 cfh (cubic feet per hour). *Not Recommended.

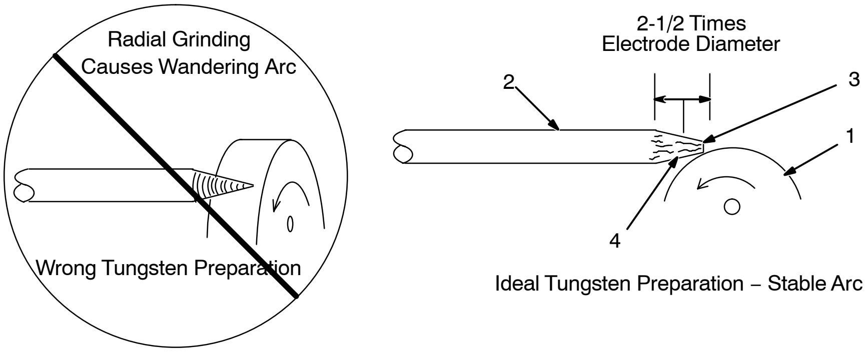
Figures listed are a guide and are a composite of recommendations from American Welding Society (AWS) and electrode manufacturers.

5-2. Preparing Tungsten Electrode For Welding



▲ **Grinding the tungsten electrode produces dust and flying sparks which can cause injury and start fires. Use local exhaust (forced ventilation) at the grinder or wear an approved respirator. Read MSDS for safety information. Consider using tungsten containing ceria, lanthana, or yttria instead of thoria. Grinding dust from thoriated electrodes contains low-level radioactive material. Properly dispose of grinder dust in an environmentally safe way. Wear proper face, hand, and body protection. Keep flammables away.**

A. Preparing Tungsten For DC Electrode Negative (DCEN) Welding Or AC Welding With Inverter Machines



1 Grinding Wheel

Grind end of tungsten on fine grit, hard abrasive wheel before welding. Do not use wheel for other jobs or tungsten can become contaminated causing lower weld quality.

2 Tungsten Electrode

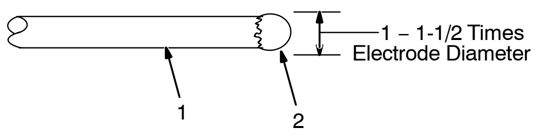
3 Flat

Diameter of this flat determines amperage capacity.

4 Straight Ground

Grind lengthwise, **not radial**.

B. Preparing Tungsten For Conventional AC Welding



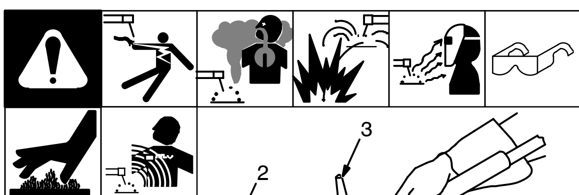
1 Tungsten Electrode

2 Balled End

Ball end of tungsten by applying AC amperage recommended for a given electrode diameter (see Section 5-1). Let ball on end of the tungsten take its own shape.

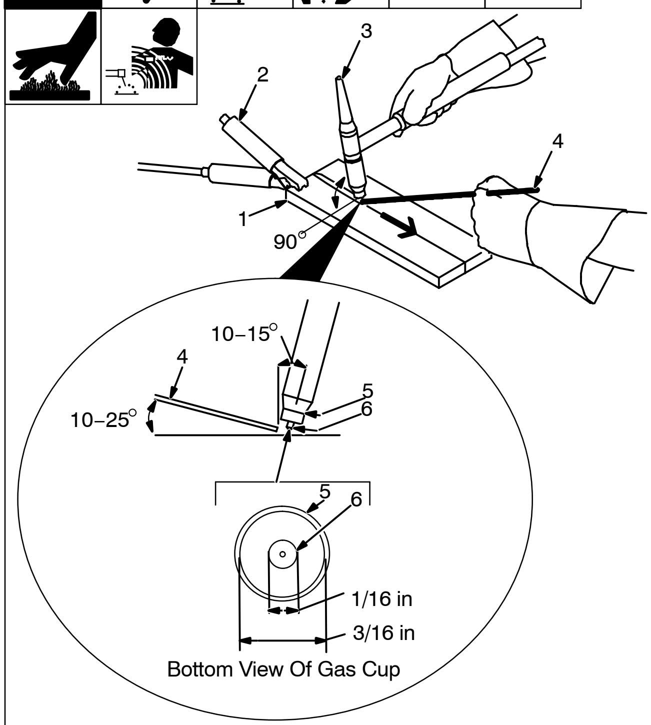
SECTION 6 – GUIDELINES FOR TIG WELDING (GTAW)

6-1. Positioning The Torch



▲ **Weld current can damage electronic parts in vehicles. Disconnect both battery cables before welding on a vehicle. Place work clamp as close to the weld as possible.**

☞ *For additional information, see your distributor for a handbook on the Gas Tungsten Arc Welding (GTAW) process.*



1 Workpiece

Make sure workpiece is clean before welding.

2 Work Clamp

Place as close to the weld as possible.

3 Torch

4 Filler Rod (If Applicable)

5 Gas Cup

6 Tungsten Electrode

Select and prepare tungsten according to Sections 5-1 and 5-2.

Guidelines:

The inside diameter of the gas cup should be at least three times the tungsten diameter to provide adequate shielding gas coverage. (For example, if tungsten is 1/16 in diameter, gas cup should be a minimum of 3/16 in diameter.

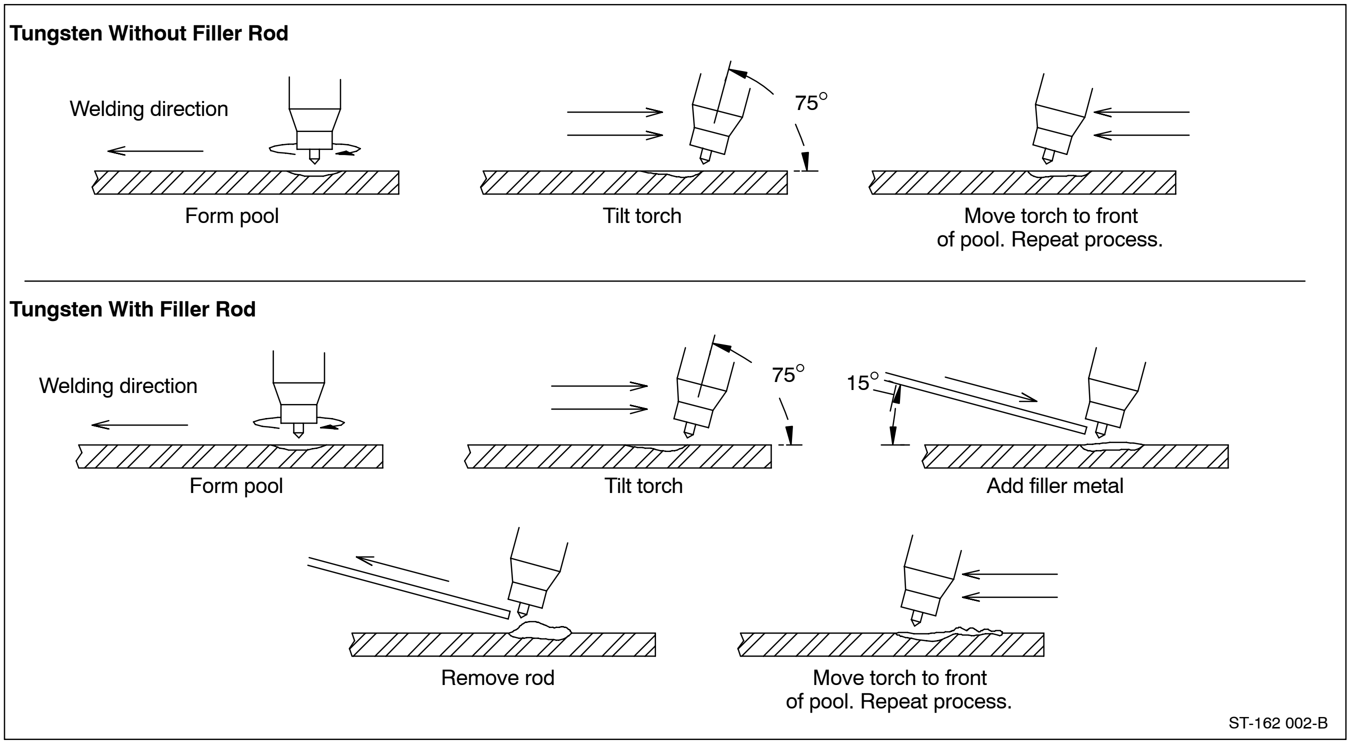
Tungsten extension is the distance the tungsten extends out gas cup of torch.

The tungsten extension should be no greater than the inside diameter of the gas cup.

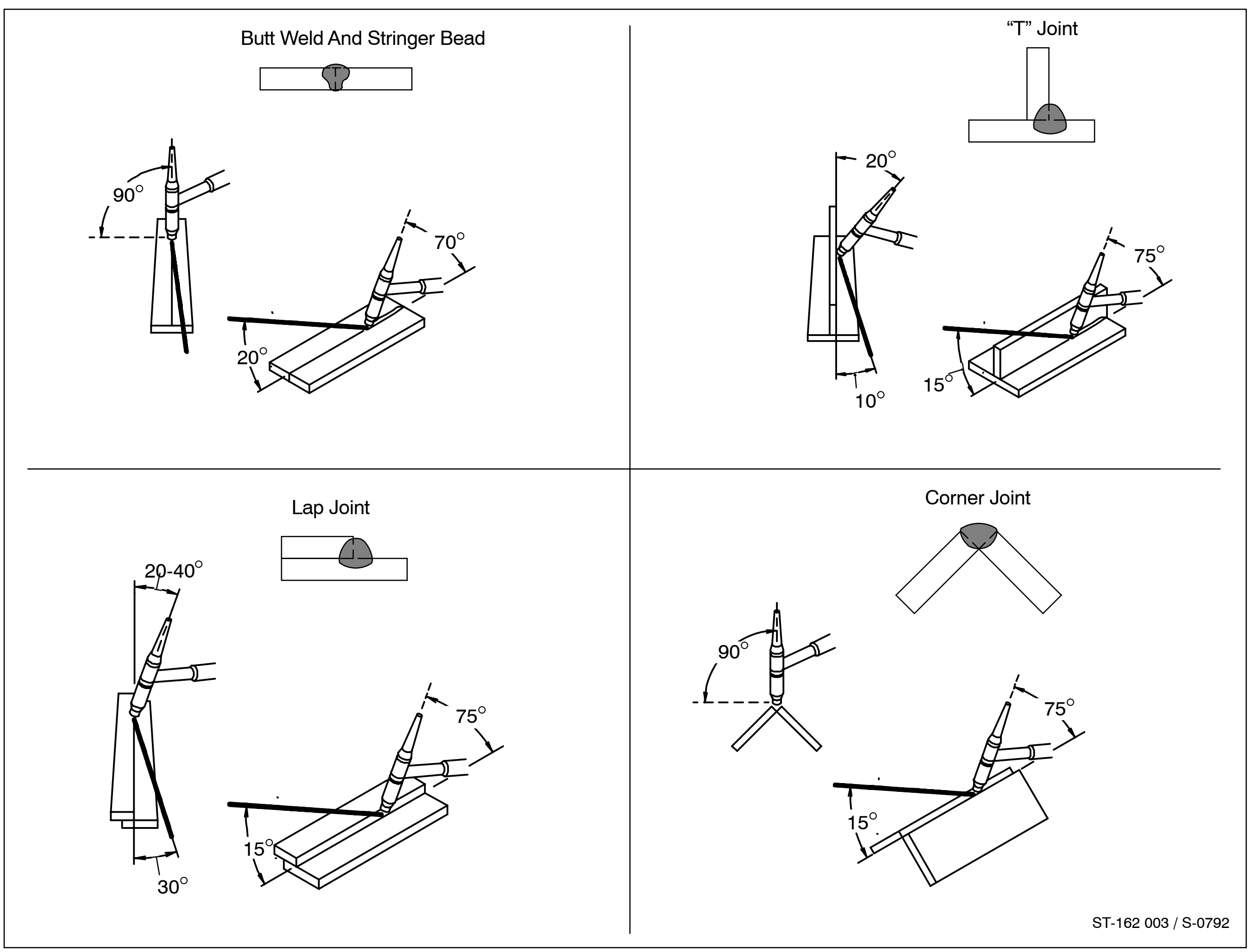
Arc length is the distance from the tungsten to the workpiece.

Ref. ST-161 892

6-2. Torch Movement During Welding



6-3. Positioning Torch Tungsten For Various Weld Joints



SECTION 7 – PARTS LIST

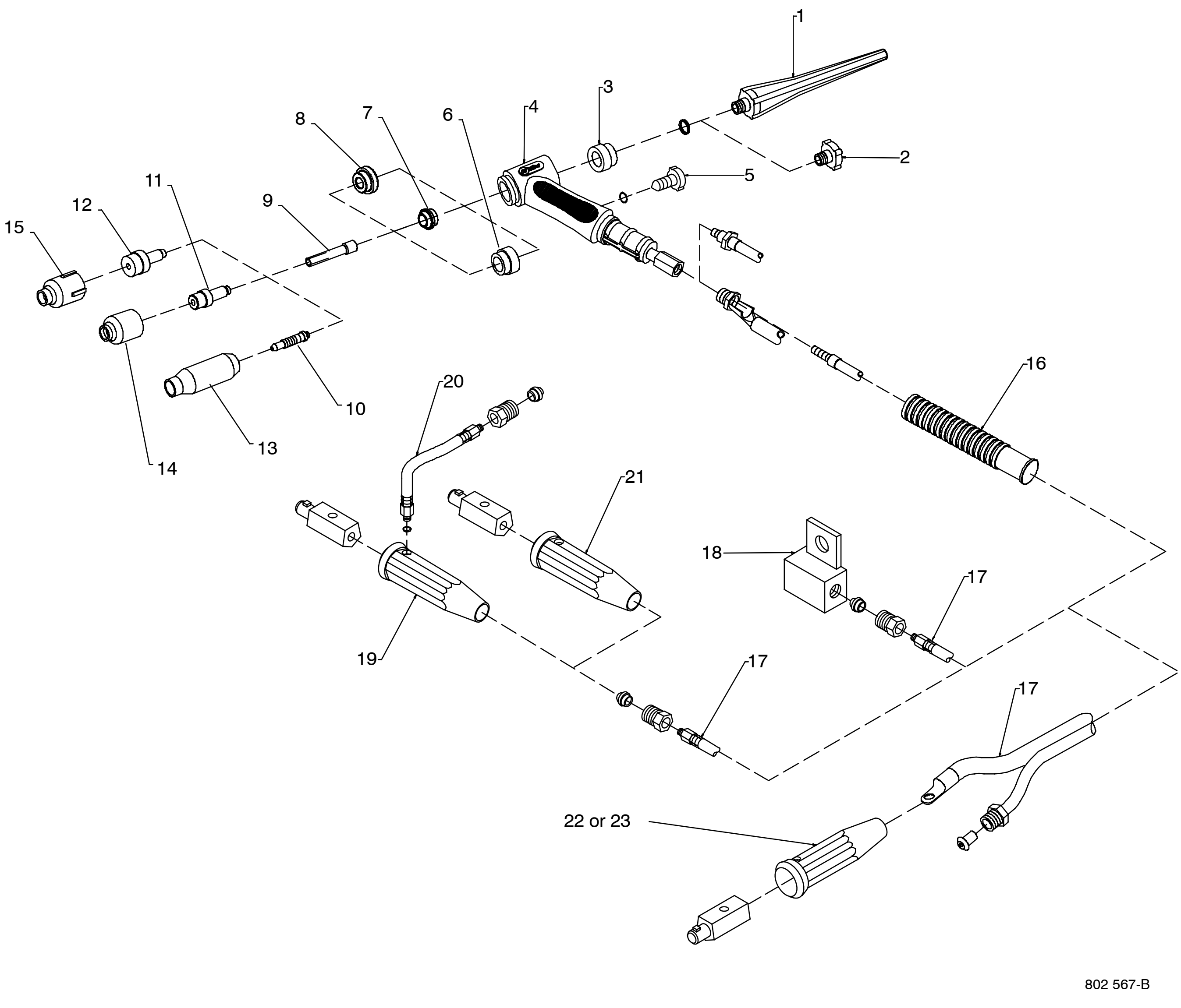


Figure 7-1. Complete Torch Assembly

Figure 7-1. Torch Models Without Gas Valve

Item No.	Stock No.	Description	Quantity – Model DB 1712R	DB 1725R	DB 1712RDI	DB 1725RDI	DB 1712 RDI25	DB 1725 RDI25
1	57Y02	BACK CAP, long	1	1	1	1	1	1
2	♦57Y04	BACK CAP, button	1	1	1	1	1	1
	199 591	O-RING	1	1	1	1	1	1
3	18-7	INSULATOR	1	1	1	1	1	1
4	DB17	TORCH BODY	1	1	1	1	1	1
6	18CG	INSULATOR, cup	1	1	1	1	1	1
7	♦54N01	GAS LENS INSULATOR, medium	1	1	1	1	1	1
8	♦54N63	GAS LENS INSULATOR, large	1	1	1	1	1	1
9	10N24	COLLET, 3/32	1	1	1	1	1	1
9	♦10N21	COLLET, .020	1	1	1	1	1	1
9	♦10N22	COLLET, .040	1	1	1	1	1	1
9	♦10N23	COLLET, 1/16	1	1	1	1	1	1
9	♦10N25	COLLET, 1/8	1	1	1	1	1	1
10	10N32	COLLET BODY, 3/32	1	1	1	1	1	1
10	♦10N29	COLLET BODY, .020	1	1	1	1	1	1
10	♦10N28	COLLET BODY, 1/8	1	1	1	1	1	1
10	♦10N30	COLLET BODY, .040	1	1	1	1	1	1
10	♦10N31	COLLET BODY, 1/16	1	1	1	1	1	1
11	♦45V24	GAS LENS, medium	1	1	1	1	1	1
11	♦45V25	GAS LENS, medium	1	1	1	1	1	1
11	♦45V26	GAS LENS, medium	1	1	1	1	1	1
11	♦45V27	GAS LENS, medium	1	1	1	1	1	1
11	♦45V29	GAS LENS, medium	1	1	1	1	1	1
12	♦45V0204	GAS LENS, large	1	1	1	1	1	1
12	♦45V116	GAS LENS, large	1	1	1	1	1	1
12	♦45V64	GAS LENS, large	1	1	1	1	1	1
12	♦995795	GAS LENS, large	1	1	1	1	1	1
13	10N47	NOZZLE, #7 alumina	1	1	1	1	1	1
13	♦10N45	NOZZLE, #10 alumina	1	1	1	1	1	1
13	♦10N46	NOZZLE, #8 alumina	1	1	1	1	1	1
13	♦10N48	NOZZLE, #6 alumina	1	1	1	1	1	1
13	♦10N49	NOZZLE, #5 alumina	1	1	1	1	1	1
13	♦10N50	NOZZLE, #4 alumina	1	1	1	1	1	1
13	♦10N44	NOZZLE, #12 alumina	1	1	1	1	1	1
14	♦54N14	NOZZLE, alumina medium	1	1	1	1	1	1
14	♦54N15	NOZZLE, alumina medium	1	1	1	1	1	1
14	♦54N16	NOZZLE, alumina medium	1	1	1	1	1	1
14	♦54N17	NOZZLE, alumina medium	1	1	1	1	1	1
14	♦54N18	NOZZLE, alumina medium	1	1	1	1	1	1
15	♦57N74	NOZZLE, alumina large	1	1	1	1	1	1
15	♦57N75	NOZZLE, alumina large	1	1	1	1	1	1
15	♦53N87	NOZZLE, alumina large	1	1	1	1	1	1
15	♦53N88	NOZZLE, alumina large	1	1	1	1	1	1
16	H100RM	HANDLE	1	1	1	1	1	1
17	57Y03R	CABLE, power 25 ft – 1 piece		1		1		1
17	57Y01R	CABLE, power 12 ft – 1 piece	1		1		1	1
18	♦105Z57	ADAPTER, power cable (incl in DTP kit)	1	1	1	1	1	1
19	♦194 720	ADAPTER	1	1	1	1	1	1
20	♦198 313	HOSE	1	1		1	1	

Item No.	Stock No.	Description	Quantity Model DB 1712R	DB 1725R	DB 1712 RDI	DB 1725 RDI	DB 1712 RDI 25	DB 1725 RDI 25
		Figure 7-1. Torch Models Without Gas Valve (continued)						
21	♦194 722	ADAPTER, intl style flow through	1	1	1	1		
21	195 234	ADAPTER, intl style flow through					1	1
22	♦127 836	PLUG, international style, tw lk insul male						1
23	♦129 527	PLUG, international style tw lk insul male						1
	♦AK2C	ACCESSORY KIT (included in DTP kit)	1	1	1	1	1	1
	♦CC322HD	CABLE COVER, 25 ft (not shown)		1		1		1
	♦CC310HD	CABLE COVER, 12ft (not shown)	1			1		1
	♦194738	REGULATOR (included in DTP kit)		1		1		1
	♦198 319	CLAMP, ground 15ft (incl in DTP kit)		1		1		1
	♦198 317	HOSE, gas 12 ft (incl in DTP kit)		1		1		1
	♦198 316	HOSE, gas 3 ft (incl in DTP kit)		1		1		1

♦OPTIONAL

BE SURE TO PROVIDE MODEL AND STYLE NUMBER WHEN ORDERING REPLACEMENT PARTS.

Item No.	Stock No.	Description	Quantity / Model: DB 17V12R	DB 17V25R	DB 17V12-2	DB 17V25-2

Figure 7-1. Torch Models With Gas Valve

Item No.	Stock No.	Description	DB 17V12R	DB 17V25R	DB 17V12-2	DB 17V25-2
1	57Y02	BACK CAP, long	1	1	1	1
2	♦57Y04	BACK CAP, button	1	1	1	1
	199 591	O-RING	1	1	1	1
3	18-7	INSULATOR	1	1	1	1
4	DB17V	TORCH BODY, w/valve	1	1	1	1
5	VS2	VALVE STEM	1	1	1	1
	199 591	O-RING	1	1	1	1
6	18CG	INSULATOR, cup	1	1	1	1
7	♦54N01	GAS LENS INSULATOR, medium	1	1	1	1
8	♦54N63	GAS LENS INSULATOR, large	1	1	1	1
9	10N24	COLLET, 3/32	1	1	1	1
9	♦10N21	COLLET, .020	1	1	1	1
9	♦10N22	COLLET, .040	1	1	1	1
9	♦10N23	COLLET, 1/16	1	1	1	1
9	♦10N25	COLLET, 1/8	1	1	1	1
10	10N32	COLLET BODY, 3/32	1	1	1	1
10	♦10N29	COLLET BODY, .020	1	1	1	1
10	♦10N28	COLLET BODY, 1/8	1	1	1	1
10	♦10N30	COLLET BODY, .040	1	1	1	1
10	♦10N31	COLLET BODY, 1/16	1	1	1	1
11	♦45V24	GAS LENS, medium	1	1	1	1
11	♦45V25	GAS LENS, medium	1	1	1	1
11	♦45V26	GAS LENS, medium	1	1	1	1
11	♦45V27	GAS LENS, medium	1	1	1	1
11	♦45V29	GAS LENS, medium	1	1	1	1
12	♦45V0204	GAS LENS, large	1	1	1	1
12	♦45V116	GAS LENS, large	1	1	1	1
12	♦45V64	GAS LENS, large	1	1	1	1
12	♦995795	GAS LENS, large	1	1	1	1
12	♦45V63	GAS LENS, large	1	1	1	1
13	10N47	NOZZEL, #7 alumina	1	1	1	1
13	♦10N45	NOZZEL, #10 alumina	1	1	1	1
13	♦10N46	NOZZEL, #8 alumina	1	1	1	1
13	♦10N48	NOZZEL, #6 alumina	1	1	1	1
13	♦10N49	NOZZEL, #5 alumina	1	1	1	1
13	♦10N50	NOZZEL, #4 alumina	1	1	1	1
13	♦10N44	NOZZEL, #12 alumina	1	1	1	1
14	♦54N14	NOZZEL, alumina medium	1	1	1	1
14	♦54N15	NOZZEL, alumina medium	1	1	1	1
14	♦54N16	NOZZEL, alumina medium	1	1	1	1
14	♦54N17	NOZZEL, alumina medium	1	1	1	1
14	♦54N18	NOZZEL, alumina medium	1	1	1	1
15	♦57N74	NOZZEL, alumina large	1	1	1	1
15	♦57N75	NOZZEL, alumina large	1	1	1	1
15	♦53N87	NOZZEL, alumina large	1	1	1	1
15	♦53N88	NOZZEL, alumina large	1	1	1	1
16	H100RM	HANDLE	1	1	1	1
17	57Y03R	CABLE, power 25 ft – 1 piece		1		
17	57Y01R	CABLE, power 12 ft – 1 piece	1			
17	57Y032	CABLE, power 25 ft – 2 piece				1
17	57Y012	CABLE, power 12 ft – 2 piece			1	
18	♦105Z57	ADAPTER, power cable (included in DTP kit)		1		
19	♦194 720	ADAPTER, w/gas hose		1		
20	♦198 313	HOSE		1		

Item No.	Stock No.	Description	Quantity: Model DB 17V12R	DB 17V25R	DB 17V12-2	DB 17V25-2
Figure 7-1. Torch Models With Gas Valve (continued)						
22	♦127 836	PLUG, international style, tw lk insul male	1		1	1
23	♦129 527	PLUG, international style tw lk insul male	1		1	1
	♦AK2C	ACCESSORY KIT (included in DTP kit)	1	1	1	1
	♦CC322HD	CABLE COVER, 25 ft (not shown)		1		1
	♦CC310HD	CABLE COVER, 12ft (not shown)	1		1	
	♦194738	REGULATOR (included in DTP kit)		1		
	♦198 319	CLAMP, ground 15ft (incl in DTP kit)		1		
	♦198 317	HOSE, gas 12 ft (incl in DTP kit)		1		
	♦198 316	HOSE, gas 3 ft (incl in DTP kit)		1		

♦OPTIONAL

BE SURE TO PROVIDE MODEL AND STYLE NUMBER WHEN ORDERING REPLACEMENT PARTS.

Notes

Notes

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You always get the fast, reliable response you need. Most replacement parts can be in your hands in 24 hours.

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Effective January 1, 2005
(Equipment with a serial number preface of “LF” or newer)

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Within the warranty periods listed below, Miller will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Miller must be notified in writing within thirty (30) days of such defect or failure, at which time Miller will provide instructions on the warranty claim procedures to be followed.

Miller shall honor warranty claims on warranted equipment listed below in the event of such a failure within the warranty time periods. All warranty time periods start on the date that the equipment was delivered to the original retail purchaser, or one year after the equipment is sent to a North American distributor or eighteen months after the equipment is sent to an International distributor.

1. 5 Years Parts — 3 Years Labor
   * Original main power rectifiers
   * Inverters (input and output rectifiers only)
2. 3 Years — Parts and Labor
   * Transformer/Rectifier Power Sources
   * Plasma Arc Cutting Power Sources
   * Semi-Automatic and Automatic Wire Feeders
   * Inverter Power Sources (Unless Otherwise Stated)
   * Water Coolant Systems (Integrated)
   * Intellitig
   * Maxstar 150
   * Engine Driven Welding Generators **(NOTE: Engines are warranted separately by the engine manufacturer.)**
3. 1 Year — Parts and Labor Unless Specified
   * DS-2 Wire Feeder
   * Motor Driven Guns (w/exception of Spoolmate Spoolguns)
   * Process Controllers
   * Positioners and Controllers
   * Automatic Motion Devices
   * RFCS Foot Controls
   * Induction Heating Power Sources and Coolers
   * Water Coolant Systems (Non-Integrated)
   * Flowgauge and Flowmeter Regulators (No Labor)
   * HF Units
   * Grids
   * Maxstar 85, 140
   * Spot Welders
   * Load Banks
   * Arc Stud Power Sources & Arc Stud Guns
   * Racks
   * Running Gear/Trailers
   * Plasma Cutting Torches (except APT & SAF Models)
   * Field Options (NOTE: Field options are covered under True Blue® for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)
4. 6 Months — Batteries
5. 90 Days — Parts
   * MIG Guns/TIG Torches
   * Induction Heating Coils and Blankets
   * APT & SAF Model Plasma Cutting Torches
   * Remote Controls
   * Accessory Kits
   * Replacement Parts (No labor)
   * Spoolmate Spoolguns
   * Canvas Covers

Miller’s True Blue® Limited Warranty shall not apply to:

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2. Items furnished by Miller, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer’s warranty, if any.
3. Equipment that has been modified by any party other than Miller, or equipment that has been improperly installed, improperly operated or misused based upon industry standards, or equipment which has not had reasonable and necessary maintenance, or equipment which has been used for operation outside of the specifications for the equipment.

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Please complete and retain with your personal records.

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Purchase Date	(Date which equipment was delivered to original customer.)
Distributor	
Address	
City	
State	Zip

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